

Listing of Claims:

This listing of the claims will replace all prior versions and listings of the claims in this application:

1. (Withdrawn) A metal comprising:
 - a substrate with an exterior surface; and
 - a protective biofilm positioned on said exterior surface that reduces corrosion of said exterior surface;wherein said metal is not steel, copper or aluminum.
2. (Withdrawn) The metal of Claim 1, wherein said metal is brass UNS-C26000.
3. (Withdrawn) The metal of Claim 1, wherein said biofilm is a bacterium.
4. (Withdrawn) The metal of Claim 3, wherein said bacterium is an aerobe.
5. (Withdrawn) The metal of Claim 4, wherein said bacterium is *Bacillus subtilis* or *Bacillus licheniformis*.
6. (Withdrawn) The metal of Claim 1, wherein said biofilm is between about 10 μm and about 20 μm thick.
7. (Withdrawn) A method for reducing metal corrosion comprising:
 - providing a metal with an exterior surface;
 - applying on said exterior surface a protective biofilm that reduces corrosion of said exterior surface;wherein said metal is not copper, aluminum or steel.
8. (Withdrawn) The method of Claim 7, wherein said providing step includes the step of providing a metal that is brass UNS-C26000.

9. (Withdrawn) The method of Claim 7, wherein said applying step includes the step of applying a protective biofilm that is a bacterium.

10. (Withdrawn) The method of Claim 9, wherein said applying step includes the step of applying a bacterium that is an aerobe

11. (Withdrawn) The method of Claim 10, wherein said applying step includes the step of applying a bacterium that is *Bacillus subtilis* or *Bacillus licheniformis*.

12. (Withdrawn) The method of Claim 7, wherein said applying step includes the step of applying a protective biofilm that is between about 10 μm and about 20 μm thick.

13. (Withdrawn) The method of Claim 7, wherein said providing step includes the step of providing a metal that is immersed in a liquid.

14. (Withdrawn) The method of Claim 13, wherein said providing step includes the step of providing a metal that is immersed in artificial seawater or Luria-Bertani medium.

15. (Withdrawn) A metal comprising:
a substrate with an exterior surface; and
a protective biofilm positioned on said exterior surface that reduces corrosion of said exterior surface;
wherein said protective biofilm is a bacterium that secretes a polyanionic chemical composition.

16. (Withdrawn) The metal of Claim 15, wherein said metal is selected from the group consisting of aluminum, aluminum alloy, copper, a copper alloy, titanium, a titanium alloy, nickel and a nickel alloy.

17. (Withdrawn) The metal of Claim 15, wherein said metal is steel.

18. (Withdrawn) The metal of Claim 17, wherein said steel is mild steel-1010.
19. (Withdrawn) The metal of Claim 15, wherein said bacterium is an aerobe.
20. (Withdrawn) The metal of Claim 19, wherein said bacterium is *E. coli*.
21. (Withdrawn) The metal of Claim 15, wherein said bacterium has been genetically engineered to secrete the polyanionic chemical composition.
22. (Withdrawn) The metal of Claim 15, wherein said polyanionic chemical composition is polyphosphate.
23. (Withdrawn) The metal of Claim 15, wherein said biofilm is between about 10 μm and about 20 μm thick.
24. (Currently Amended) A method for reducing corrosion comprising:
providing a metal with an exterior surface; and
applying forming on said exterior surface a protective biofilm that reduces corrosion of said exterior surface; wherein said protective biofilm is comprises a bacterium that secretes bacteria that secrete a polyanion polyanionic-chemical composition.
25. (Currently Amended) The method of Claim 24, wherein said providing-step includes the step of providing a metal that is selected from the group consisting of aluminum, an aluminum alloy, copper, a copper alloy, titanium, a titanium alloy, nickel and a nickel alloy.
26. (Currently Amended) The method of Claim 24, wherein said providing-step includes the step of providing a metal that is comprises steel.
27. (Currently Amended) The method of Claim 26, wherein said providing-step includes the step of providing a metal that is comprises mild steel-1010.

28. (Currently Amended) The method of Claim 24, wherein said ~~applying step includes the step of applying a bacterium that is an aerobic~~ biofilm comprises aerobic bacteria.

29. (Currently Amended) The method of Claim ~~28~~ 24, wherein said ~~applying step includes the step of applying a bacterium that is~~ biofilm comprises *E. coli*.

30. (Currently Amended) The method of Claim 24, wherein said ~~applying step includes the step of applying a bacterium that has~~ bacteria that secrete a polyanion have been genetically engineered to ~~secrete the polyanionic chemical composition.~~

31. (Currently Amended) The method of Claim 24, wherein said ~~applying step includes the step of applying a polyanionic chemical composition that~~ polyanion is polyphosphate.

32. (Currently Amended) The method of Claim 24, wherein said ~~applying step includes the step of applying a~~ biofilm that is between about 10 μm and about 20 μm thick.

33. (Currently Amended) The method of Claim 24, wherein said ~~providing step includes the step of providing a~~ metal that is immersed in a liquid.

34. (Currently Amended) The method of Claim 24, wherein said ~~providing step includes the step of providing a metal that~~ liquid is immersed in selected from the group consisting of artificial seawater ~~or~~ and Luria-Bertani medium.

35. (New) The method of Claim 24, wherein said biofilm comprises bacteria selected from the group consisting of *Bacillus*, *Pseudomonas*, *Serratia* and *Escherichia*.

36. (New) The method of Claim 24, wherein said biofilm comprises a *Bacillus* bacteria.

37. (New) The metal of Claim 24, wherein said biofilm comprises bacteria selected from the group consisting of *Bacillus subtilis* and *Bacillus licheniformis*.

38. (New) The method of Claim 24, wherein said bacteria secrete a siderophore.

39. (New) The method of Claim 38, wherein said siderophore is selected from the group consisting of parabactin, enterobactin and combinations thereof.

40. (New) The method of Claim 24, wherein said metal is not steel.

41. (New) A method for reducing corrosion comprising:
providing a metal; and
forming a biofilm on said metal, wherein said biofilm reduces corrosion and comprises bacteria that secrete a polyanionic polypeptide.

42. (New) The method of Claim 41, wherein said polyanionic polypeptide is polyglutamate.

43. (New) A method for reducing corrosion comprising:
providing a metal; and
forming a biofilm on said metal, wherein said biofilm reduces corrosion and comprises bacteria that secrete one or more polyanionic polypeptides selected from the group consisting of polyglutamate, polyglycine, polyaspartate and combinations thereof.